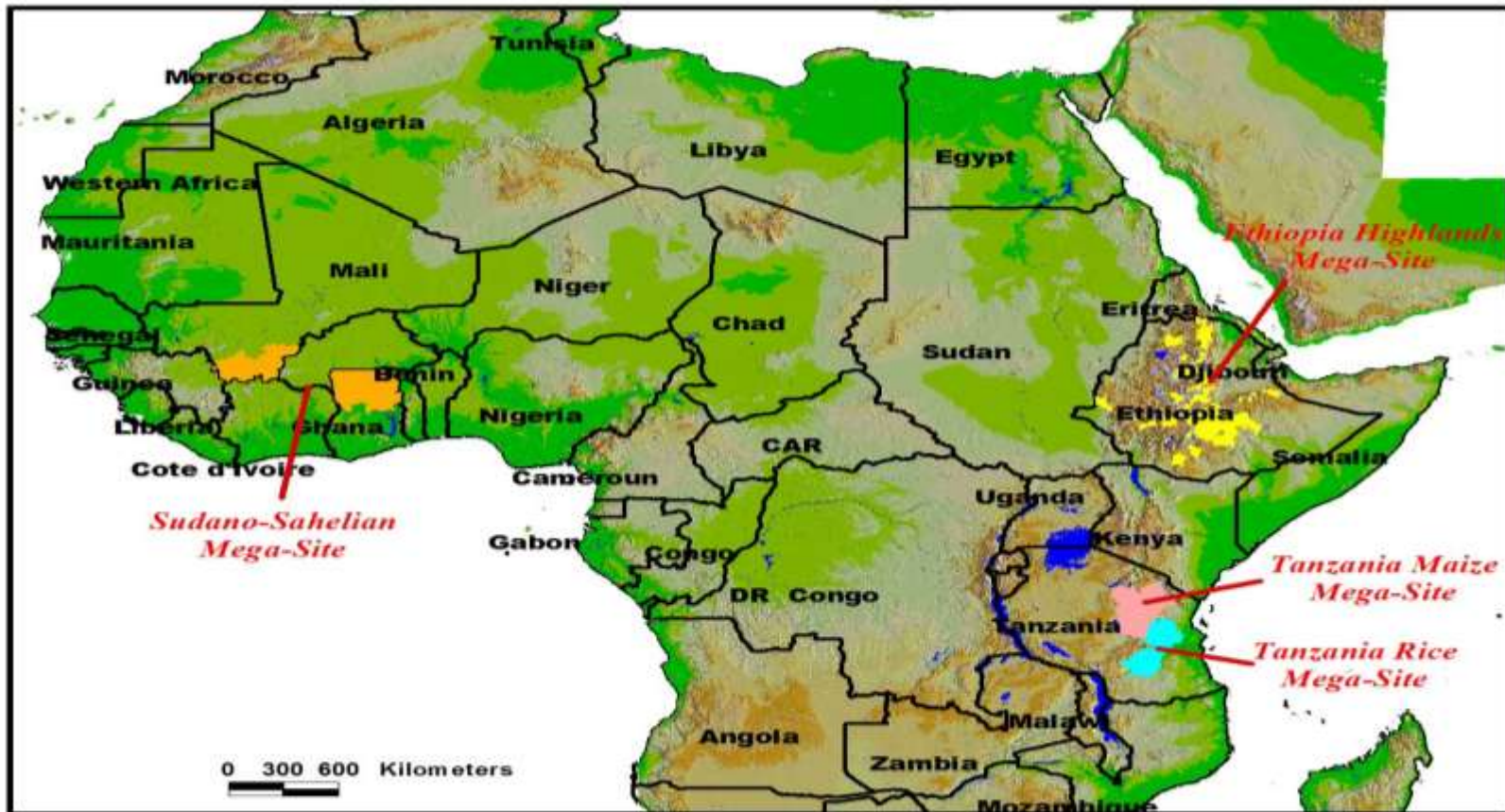


Africa RISING Program



Africa RISING Research Framework

- Outline
 - Context
 - Purpose and objectives
 - Research hypotheses
 - Research outputs and activities



Context

- Sustainably intensify household food, cash crop and livestock production in FtF target areas (West Africa, ESA, Ethiopian highlands)
- In line with USAID missions
- In line with the CRP 1.1 and 1.2
- Farm-level issues to landscape to markets (beyond the plot and field to consumers)
- Integrate multiple stakeholders
- Staple foods within major farming systems with links to nutrition and diversification
- Research backstops FtF investments

African Challenges – Purpose of Africa RISING



Purpose of Africa RISING:

Provide pathways of **hunger** and **poverty** for **small holder families**, especially for **women** and **children**, through sustainably intensified farming systems that sufficiently improve **food**, **nutrition**, and **income security** and conserve or enhance the **natural resource** base



Objectives: Research

- **Identify and evaluate** demand-driven **options for sustainable intensification (SI)** that contribute to rural poverty alleviation, improved nutrition and equity and ecosystem stability
- **Evaluate, document and share experiences with approaches for delivering and integrating** innovation for sustainable intensification (SI) in a way that will promote their uptake **beyond the Africa RISING action research sites**



Objectives: Development

- **Create opportunities for smallholders** (within Africa RISING action research sites) to move out of **poverty** and improve their **nutritional status** – especially of young **children and mothers** – while maintaining or improving **ecosystem stability**
- Facilitate **partner-led dissemination** of integrated innovations for sustainable intensification **beyond the Africa RISING action research sites**



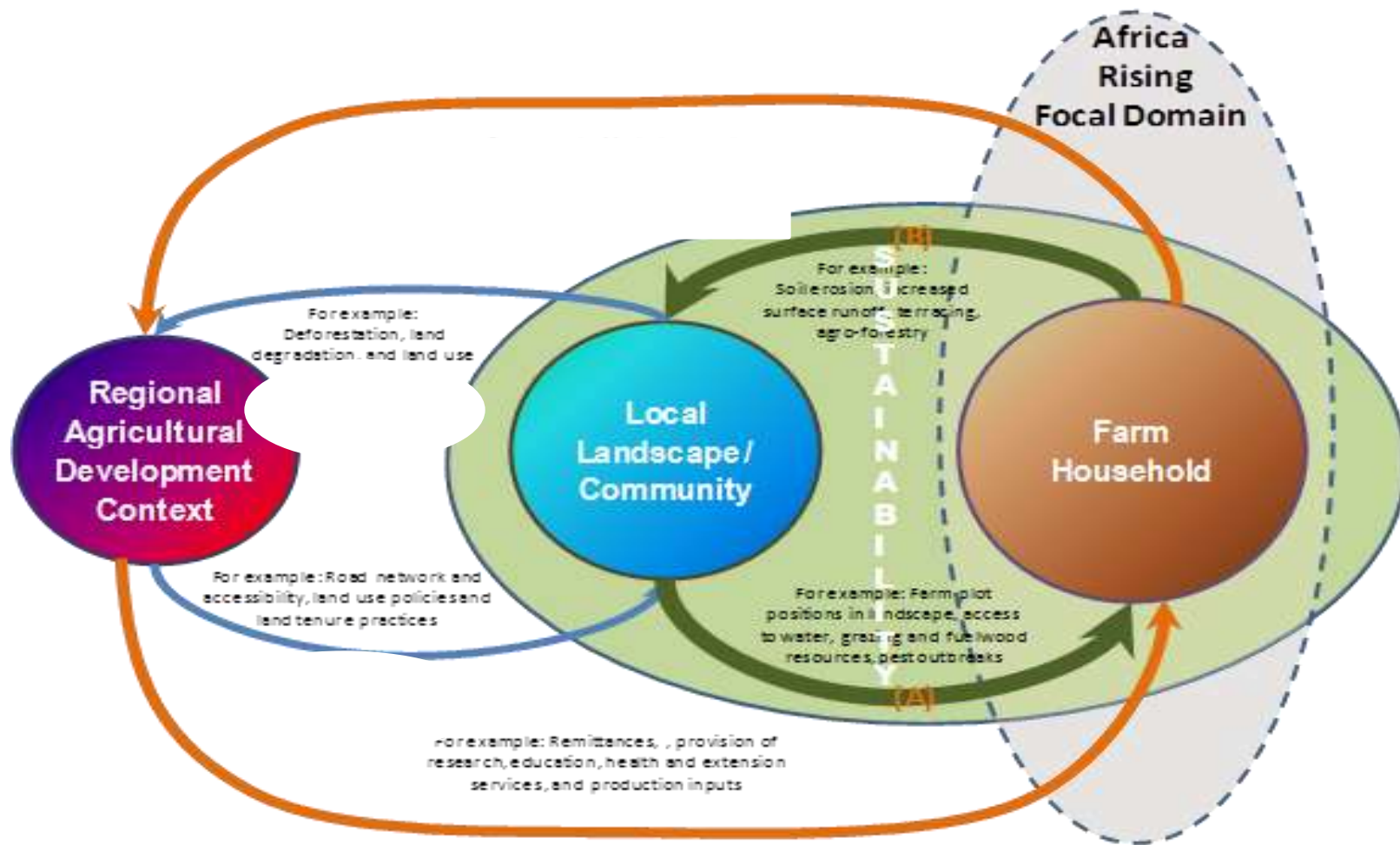
Outcomes: Research

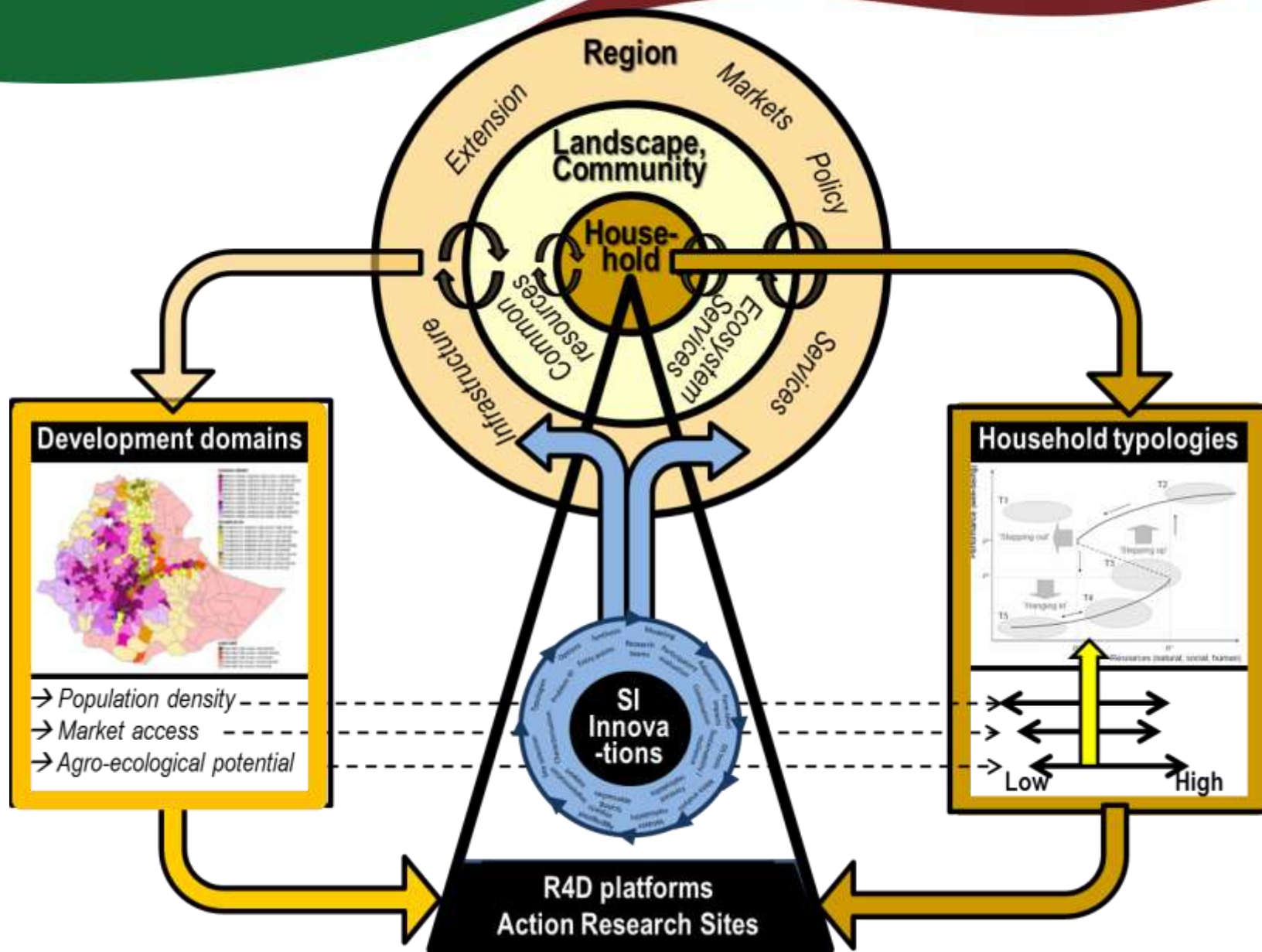
- Integrated innovations increase production and/ or improve productivity in a sustainable manner for targeted households at Africa RISING research sites
- Aggregated impact of these farming practices at household level contributes to an improved understanding of ecosystem stability at the landscape level
- Dissemination of integrated innovations for sustainable intensification leads to impacts beyond the Africa RISING action research sites



Outcomes: Development

- Wider adoption of innovations for sustainable intensification identified and tested enhances livelihoods
- Development community initiates programs on innovations for sustainable intensification by from Africa RISING







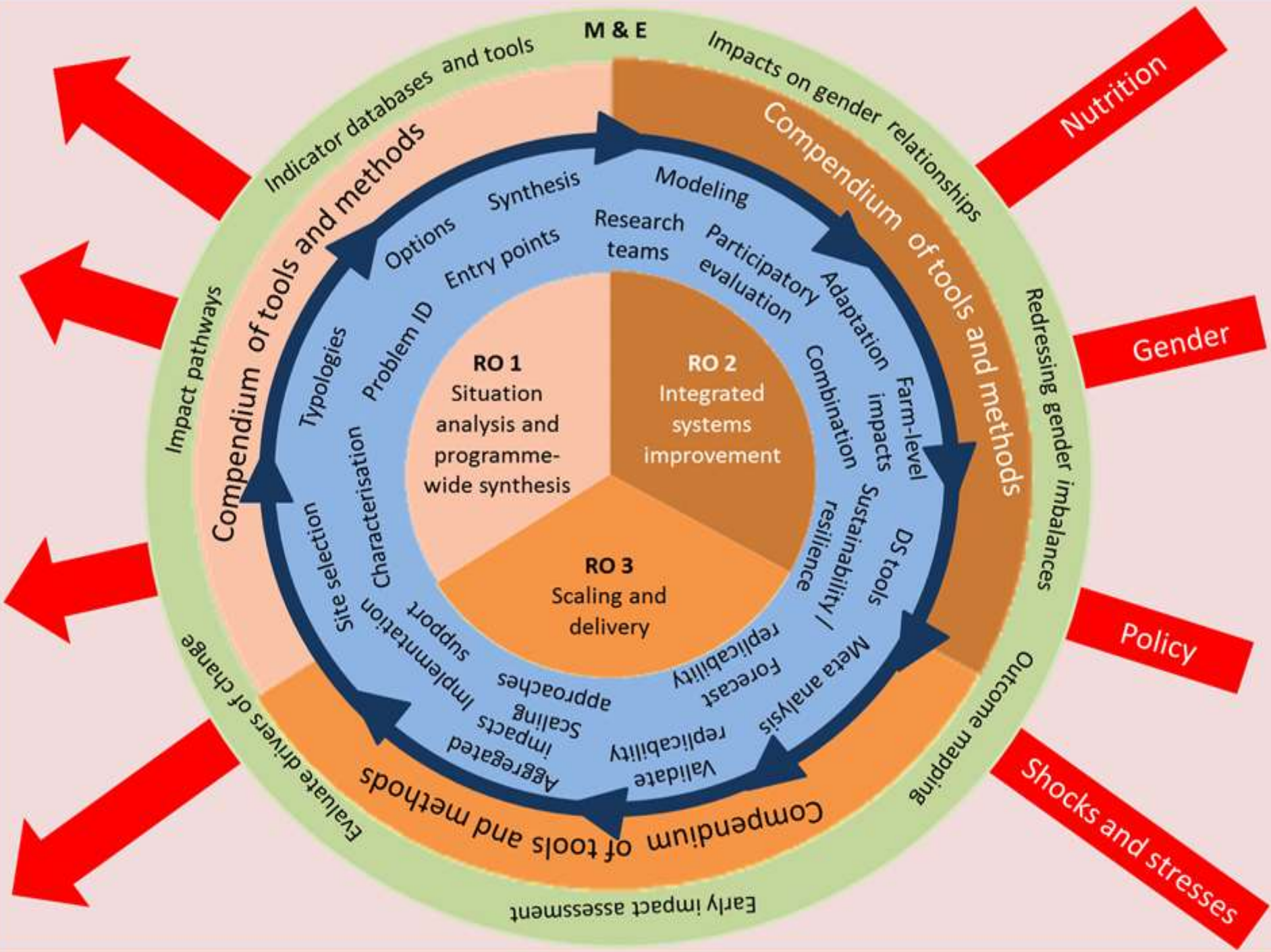
Research design: hypotheses

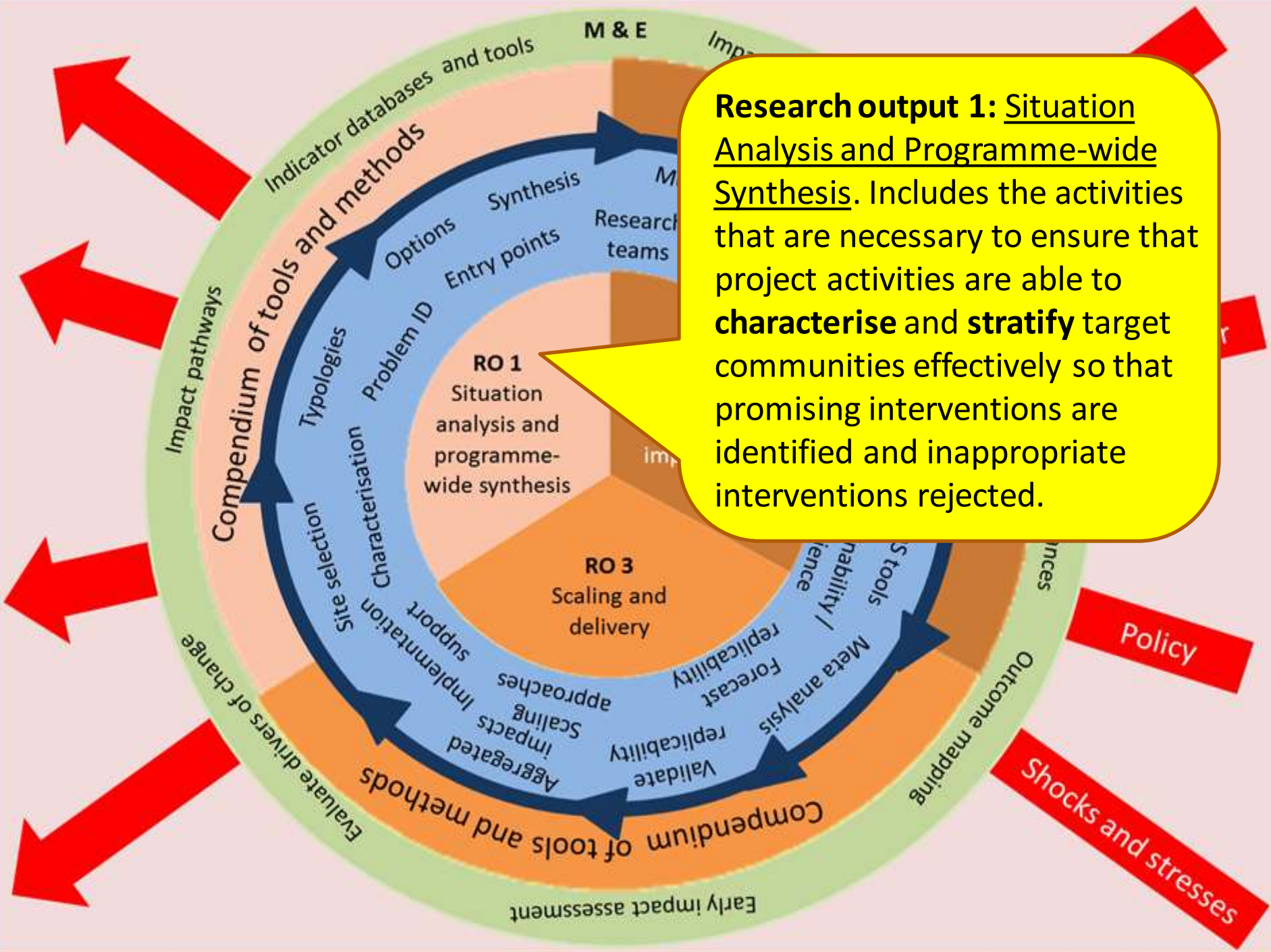
- **Integration:** Integrating technological components into sustainably intensive systems is more beneficial to small holder farmers than single components
- **Adoption:** Integrating technological components into sustainably intensive systems stimulates adoption
- **Trade-off:** Offering interventions tailored to the context specific conditions lowers environmental damage
- **Scalability:** Agricultural interventions tailored to local context specific conditions are scalable to other settings



Research outputs

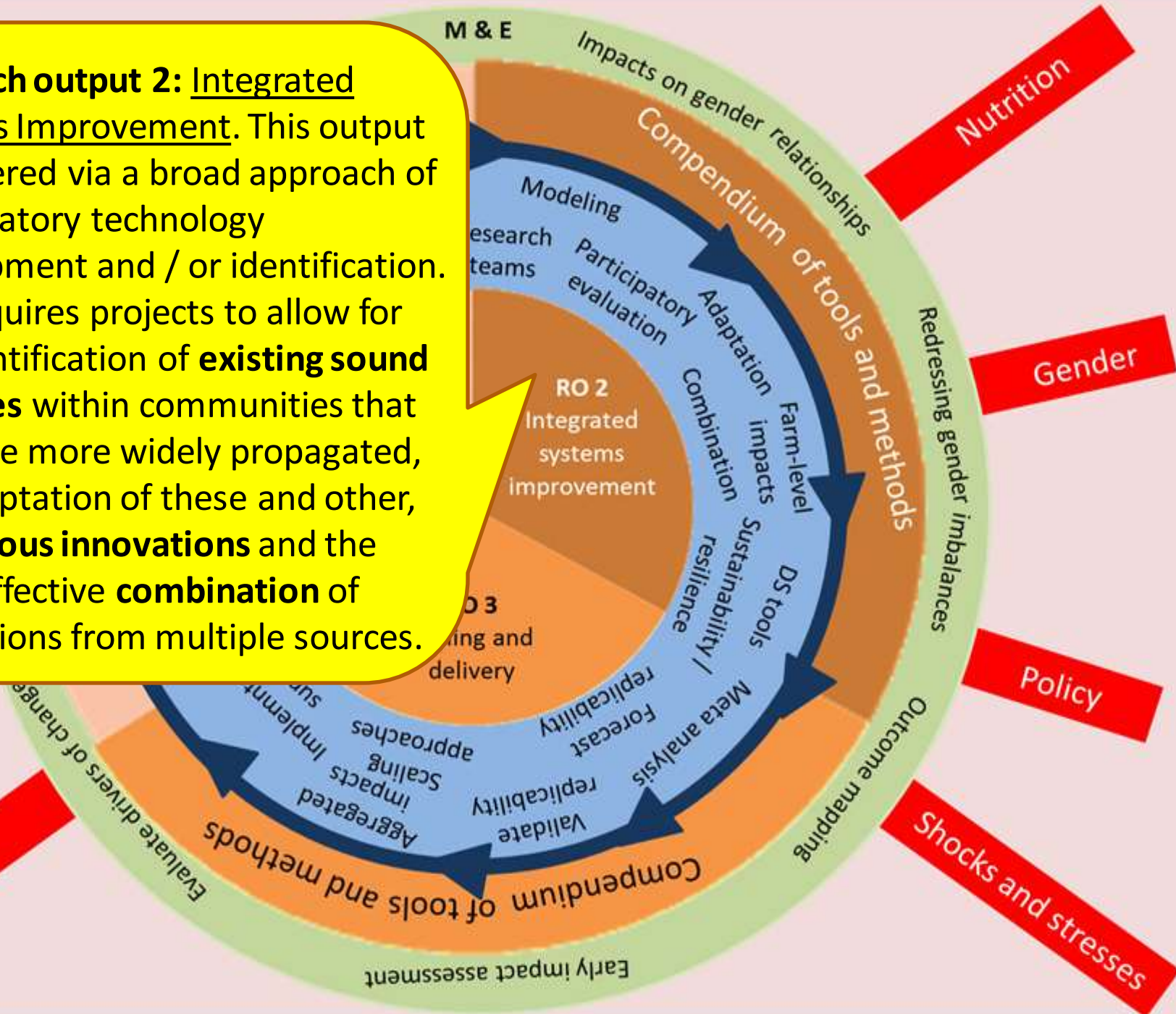
- Situation analysis and program synthesis
- Integrated Systems Improvement
- Scaling and delivery of integrated innovation
- Monitoring and evaluation

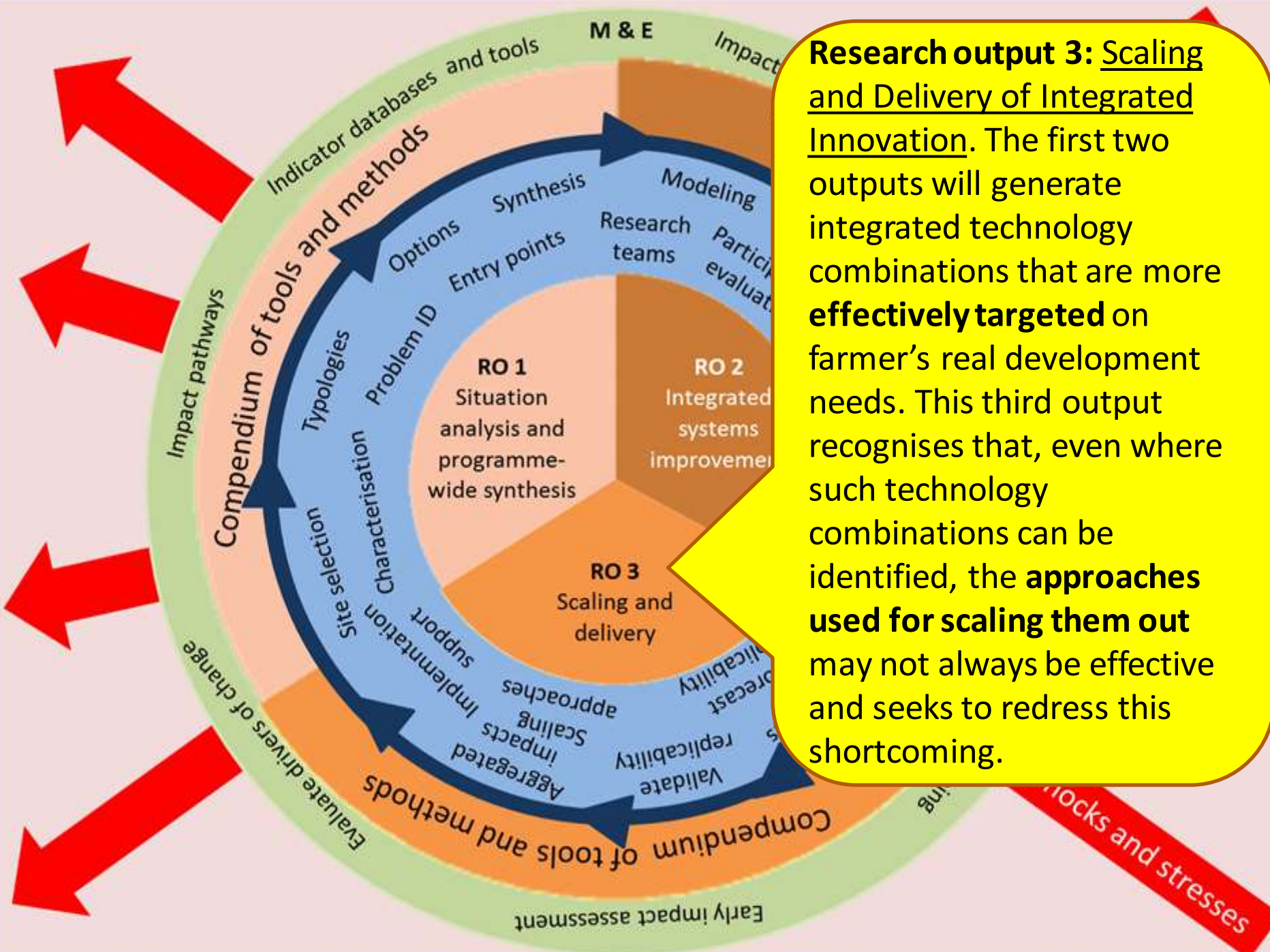




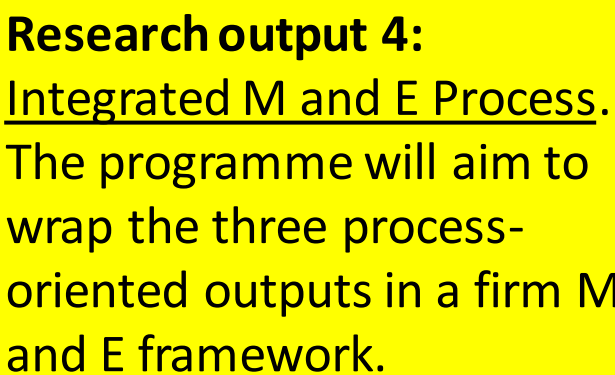
Research output 1: Situation Analysis and Programme-wide Synthesis. Includes the activities that are necessary to ensure that project activities are able to **characterise** and **stratify** target communities effectively so that promising interventions are identified and inappropriate interventions rejected.

Research output 2: Integrated Systems Improvement. This output is delivered via a broad approach of participatory technology development and / or identification. This requires projects to allow for the identification of **existing sound practices** within communities that might be more widely propagated, the adaptation of these and other, **exogenous innovations** and the more effective **combination** of innovations from multiple sources.






Research output 3: Scaling and Delivery of Integrated Innovation. The first two outputs will generate integrated technology combinations that are more **effectively targeted** on farmer's real development needs. This third output recognises that, even where such technology combinations can be identified, the **approaches used for scaling them out** may not always be effective and seeks to redress this shortcoming.





Research Output 1: Situation analysis

- **Activities**
- Determine development domains (agro-ecological potential, market access, and population density)
- Prioritize target areas (welfare, sustainability, farming systems, degradation, governments' & USAID priorities)
- Develop farm household typologies
- Identify entry points for pathways
- Inventory of innovations
- Ex-ante potential of innovations
- Priority setting and planning for integrated systems improvement
- Program-wide synthesis and co-learning



Research Output 2: Integrated systems

- Identify research teams within R4D platforms to lead innovation activities related to system improvement
- Ex-ante technology evaluation, trade-off analysis, guide future research
- Participatory evaluation and adaptation of appropriate combinations of technologies and interventions
- New research challenges and opportunities emerging from the activities



Research Output 3: Scaling

- **Activities**
- Assess scalability of integrated innovations (meta-analysis of options)
- Identify/develop scaling approaches for targeted integrated innovations
- Pilot test scaling approaches from action sites within project area
- Develop costed templates for scaling by development investors
- Evaluate aggregate impact at landscape scale



Research Output 4: Monitoring and Evaluation

- **FtF Compliance:** M&E standards, best practices, and core indicators established for the entire FtF initiative.
- **Open-access platform:** deliver and maintain an open-access, M&E data management and analysis platform to serve the needs of SI implementation partners and other stakeholders.
- **Monitoring & projection:** generate ex ante evaluations (e.g. project targets) for a range of farming system and livelihood outcome indicators on an annual basis to provide enhanced research management and outcome mapping needs.
- **Multi-scale reporting:** provide the capability to support multi-scale monitoring and evaluation
- **SSA-wide:** cross-system reporting to serve the needs of SI wide roll-up of indicators across the three investment geographies/system “project sites” (Guinea Savanna, Ethiopian Highlands, Eastern and Southern Africa)



Thank you



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Africa RISING in Ghana

- Outline
 - Partners
 - Implemented work – 2012
 - 2013 Plans



African Challenges – Purpose of Africa RISING



Purpose of Africa RISING:

Provide pathways of **hunger** and **poverty** for **small holder families**, especially for **women** and **children**, through sustainably intensified farming systems that sufficiently improve **food**, **nutrition**, and **income security** and conserve or enhance the **natural resource** base

Africa RISING - Objectives

- Identify demand-driven sustainable **intensification options** that are socially acceptable, economically feasible, and environmentally sound
- **Combine and adapt** these options to address constraints and exploit opportunities
- **Evaluate** their effectiveness at multiple scales
- **Catalyze** ongoing sustainable farm intensification

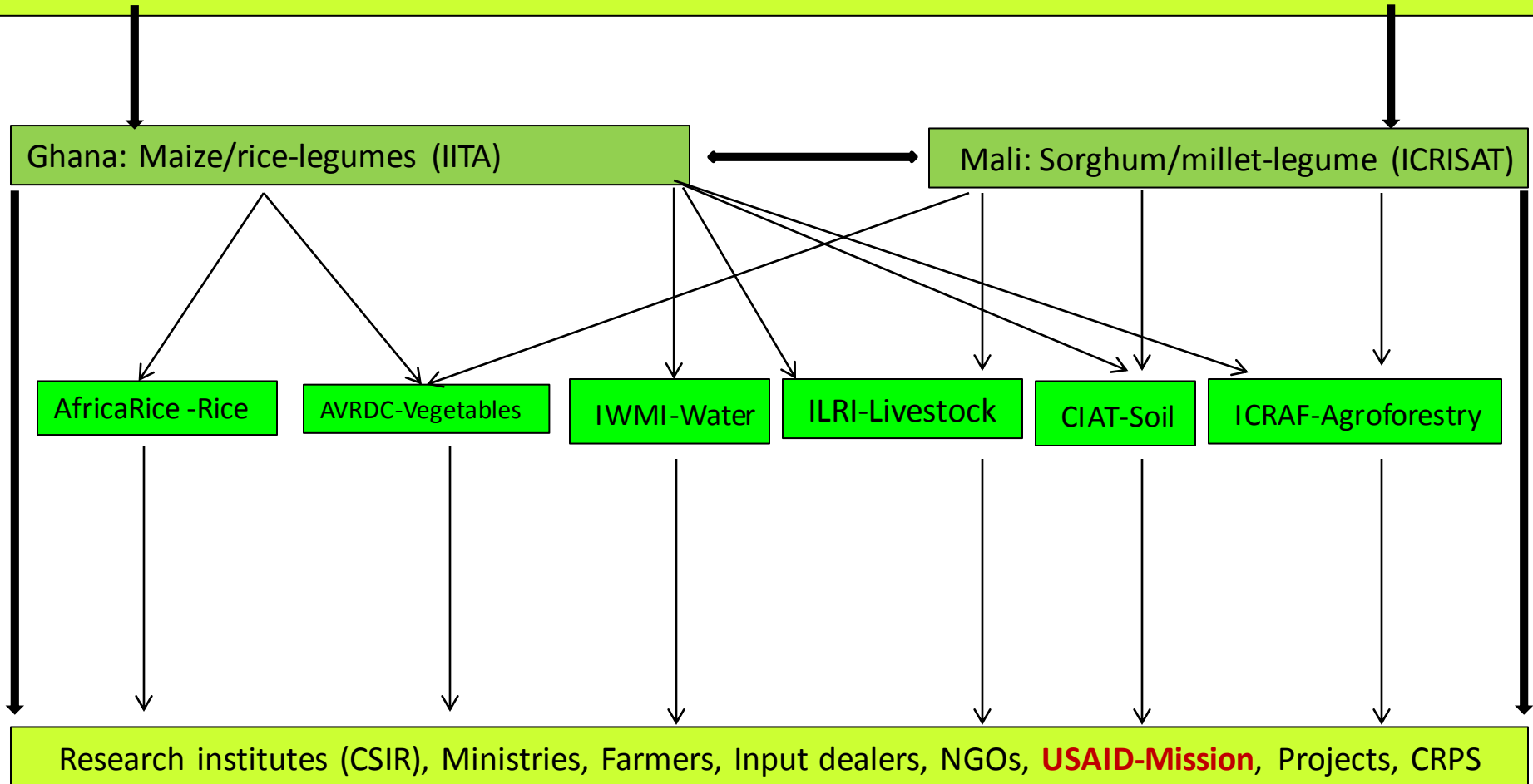


Africa RISING – Program Outcomes

- Whole farm productivity
- Natural resource management
- Connect to markets and input suppliers
- Catalyze ongoing sustainable farm intensification



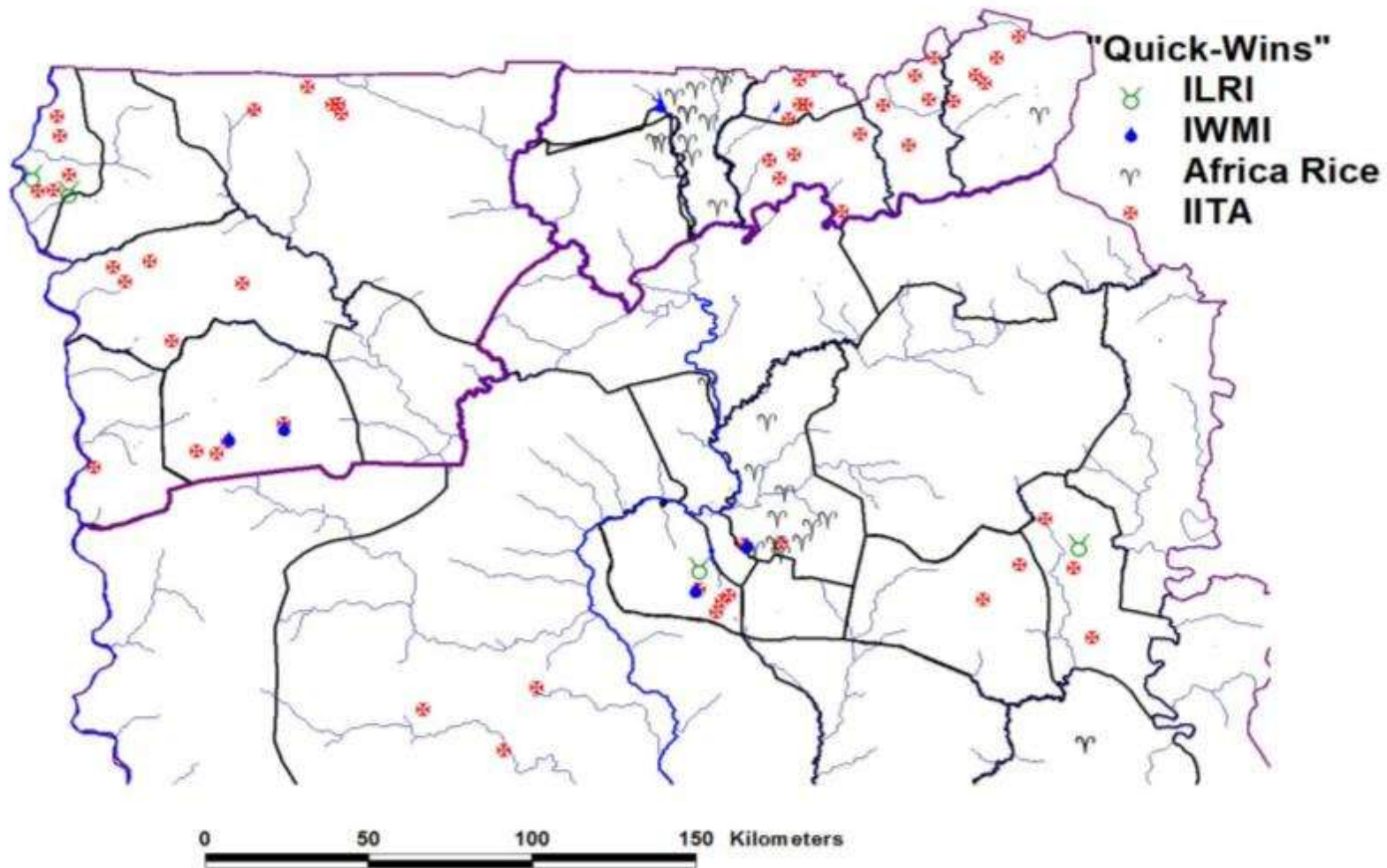
Africa RISING in West Africa : IITA – Led



Stakeholder meeting, March 2012



Quick-win sites - 2012



Highlights: Analysis of 60 communities



Major crops



Major livestock and poultry



Crop production constraints

1. **Credit**- limited access
2. **Land preparation** – inadequate equipment
3. **Soil fertility** – low
4. **Seed** – quality
5. **Water** - erratic rainfall and drought
6. **Striga**
7. **Pest** and diseases
8. **Storage** – facilities and technologies
9. **Markets** – access (some communities)
10. **Processing** – equipment and technologies



Livestock production constraints

1. **Veterinary services** - poor
2. **Diseases** – high prevalence
3. **Parasites** – internal and external
4. **Management** – in appropriate housing, feeding
5. **Water points** - inadequate
6. **Theft**
7. Breeds – improved...??
8. **Feeding** – dry season (wet season??)
9. **Markets** – access (some communities)
10. **Processing** – equipment and technologies



Community action plans

1. Crop production – on-station and on-farm

- Varietal trials
- Soil fertility management
- Cropping dates/spraying regimes
- Striga management
- Community-based seed production

2. Livestock – poultry, sheep/goats

- Disease and pest management
- Feeding management

3. Capacity building

- Farmers
- Research and extension staff



2012 Work Implemented - Components

1. Improving productivity - crop and livestock
2. Natural resource management
3. Improving household nutrition
4. Capacity building

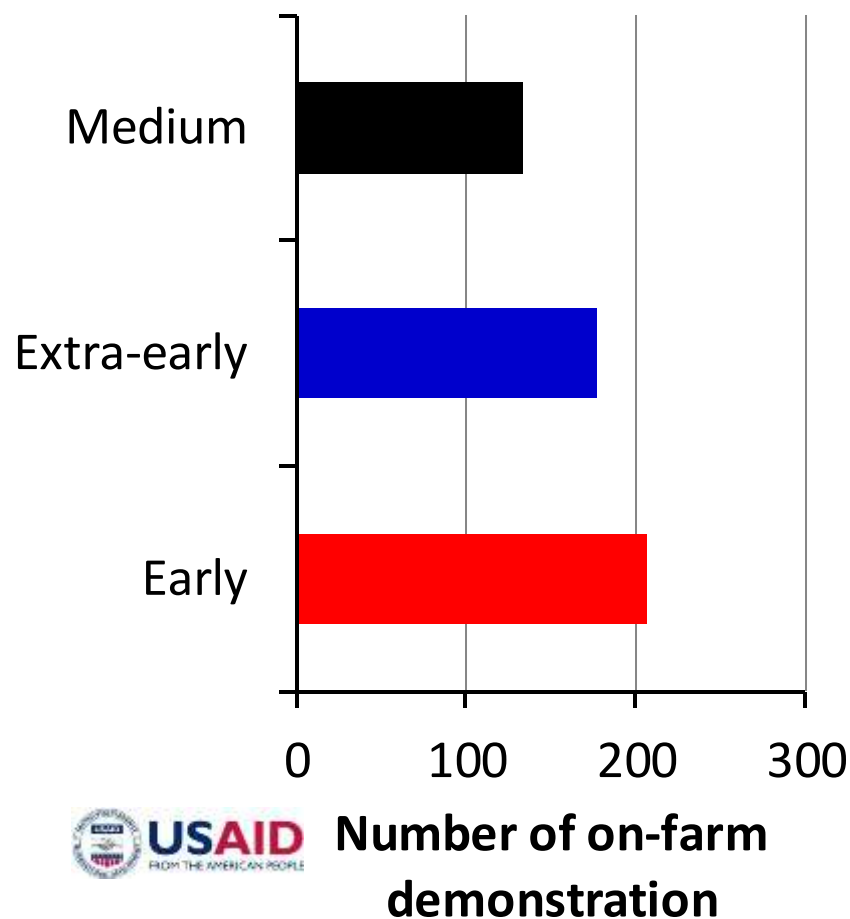


Highlights: Seed multiplication

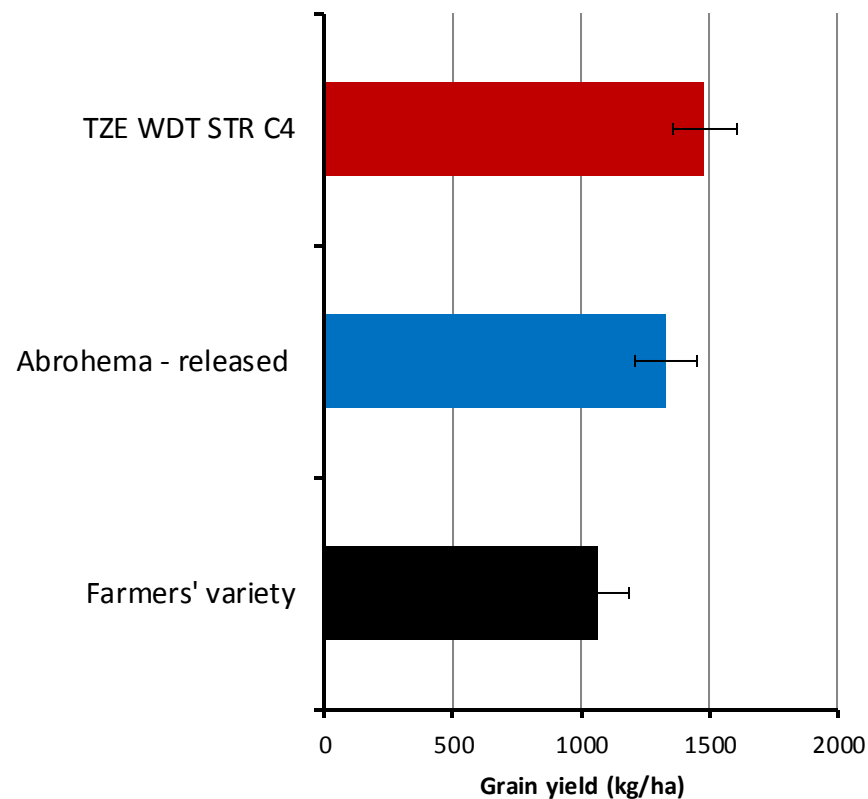


		Seed	Area cover
Crop	Variety/promising line	(kg)	(ha)
Maize	Omankwa	900	40
	Abontem	1980	88
	Aburohemaa	2700	120
	DT SR W COF2	5490	244
	Sub-total	11070	492
Cowpea	IT 89K-288	90	3
	IT 99K-2-1	90	3
	Padituya	270	10
	Apagbaala	270	10
	IT 99K-1-1	360	13
	Songotra	540	19
	Sub-total	1620	58
Soybean	TGX 1448-2F	270	7
	TGX 1904-6F	630	17
	Sub-total	900	24
Grand total		13590	574

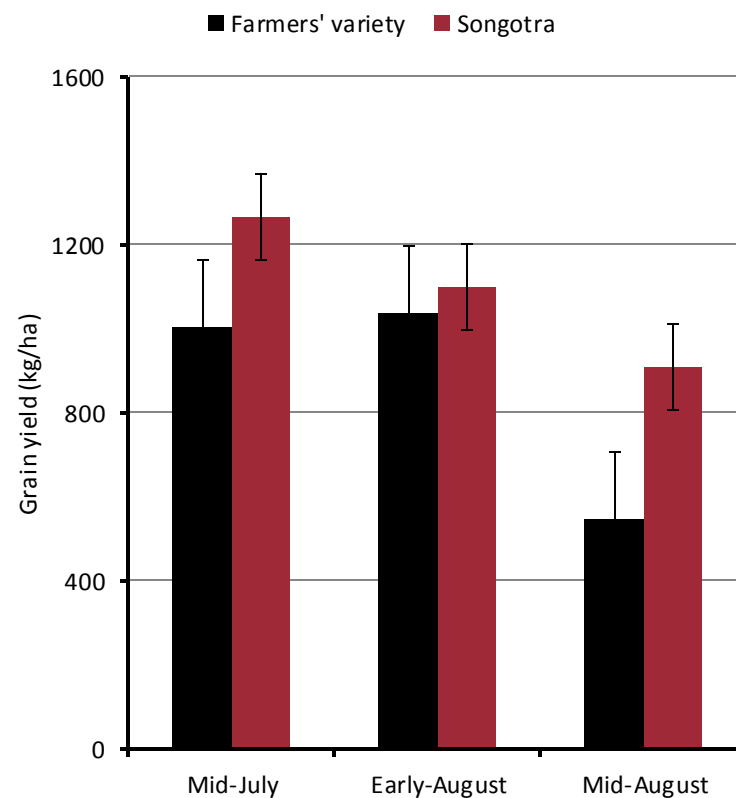
Highlights: On-farm demonstrations



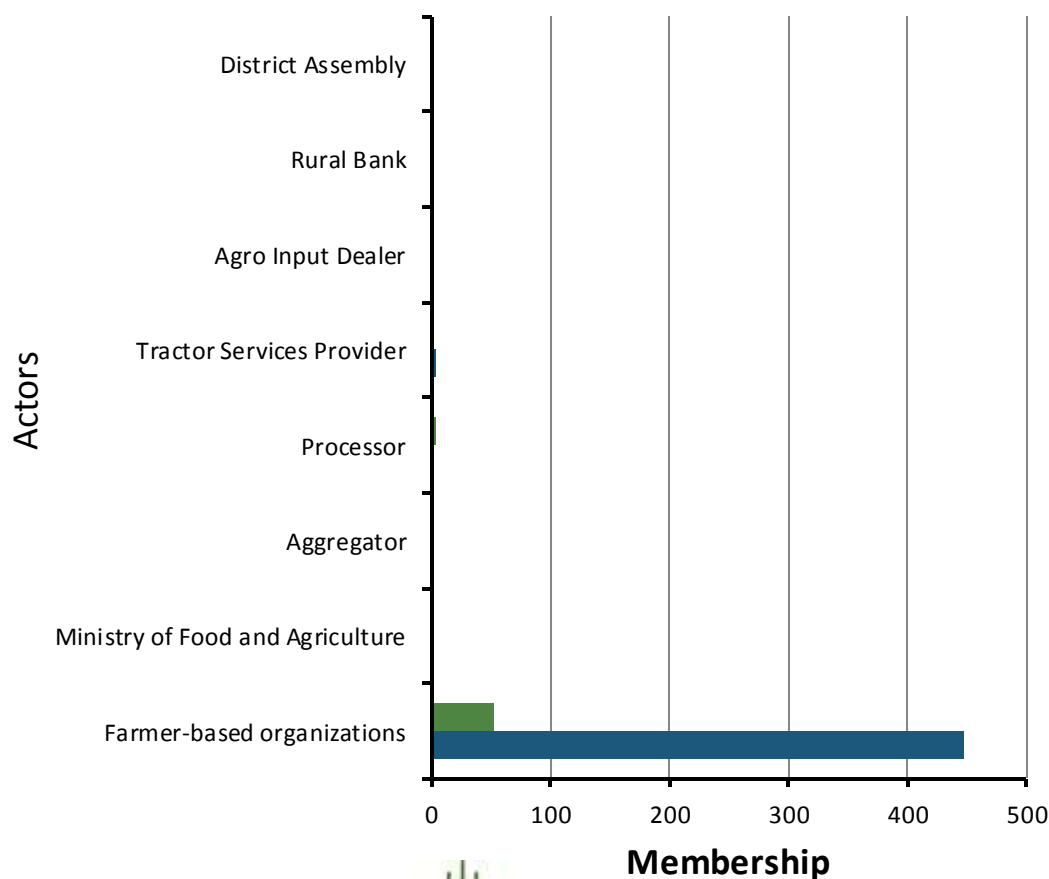
Highlights: Maize demonstrations



Highlights: Cowpea responses to planting date



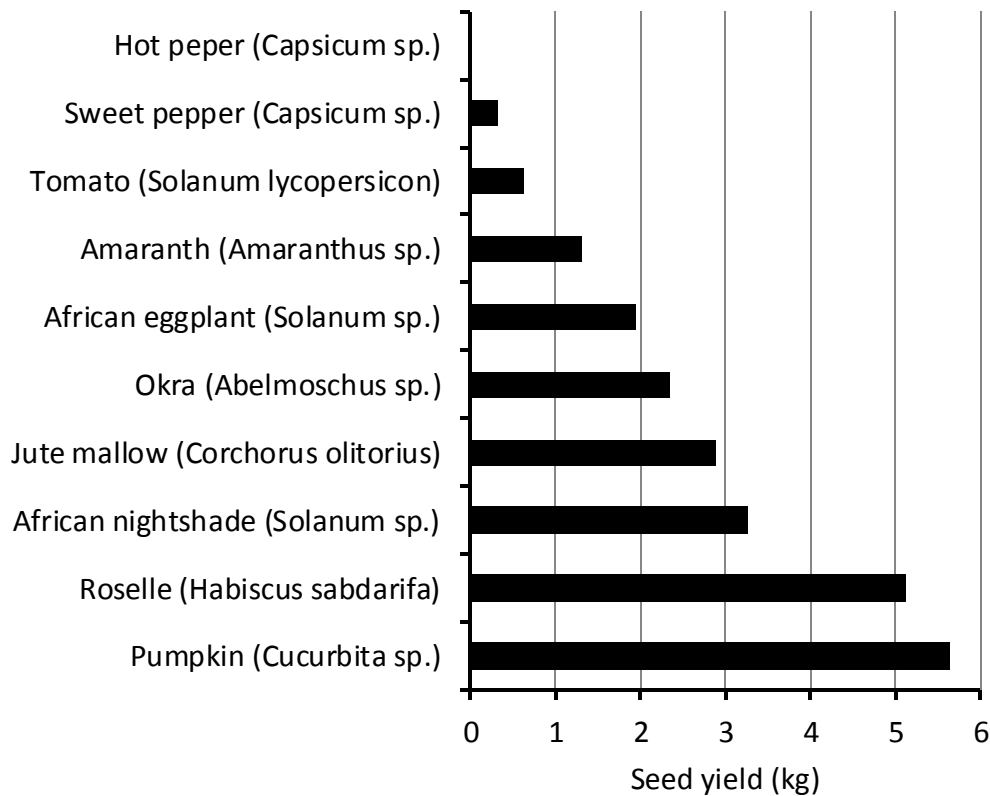
Highlights: Rice-based systems characterized



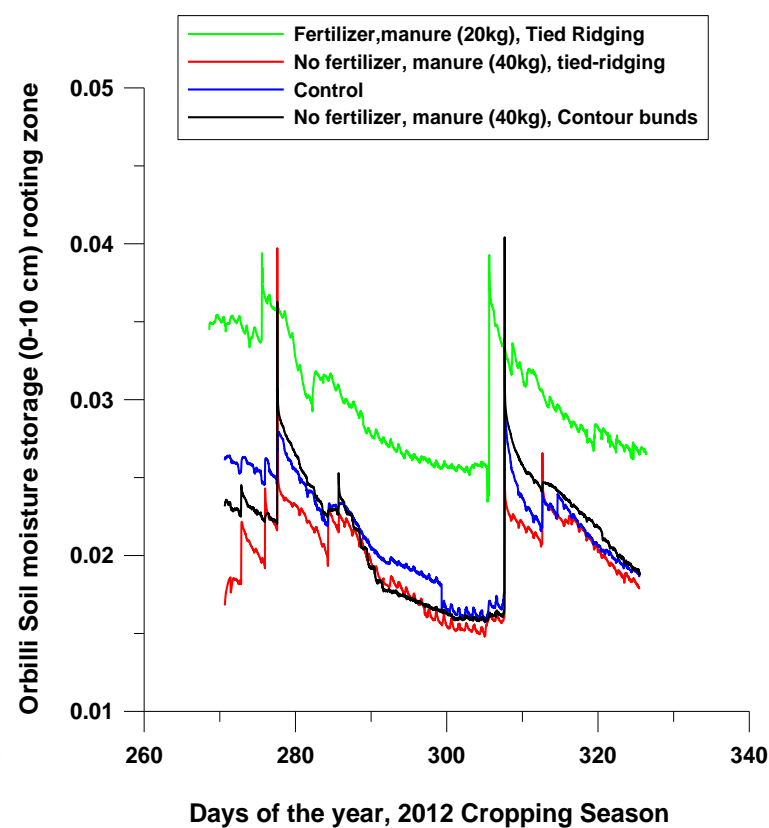
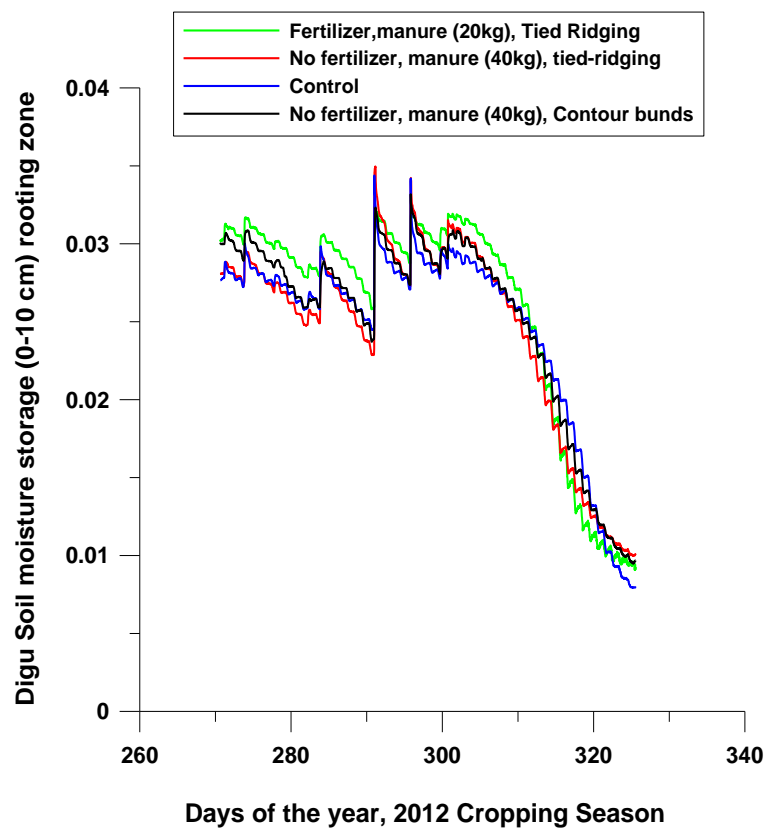
1. Baseline data collected
2. Seed produced
3. Yield gap analyzed
4. Multi-stakeholder platforms



Highlights: Vegetable seed production

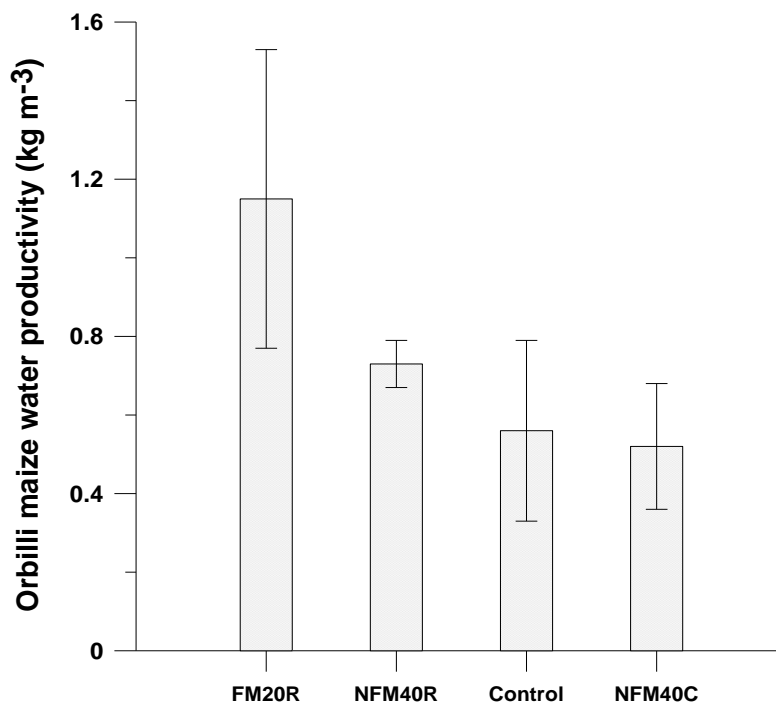


Highlights: Soil moisture responses to management



Highlights: Maize water productivity

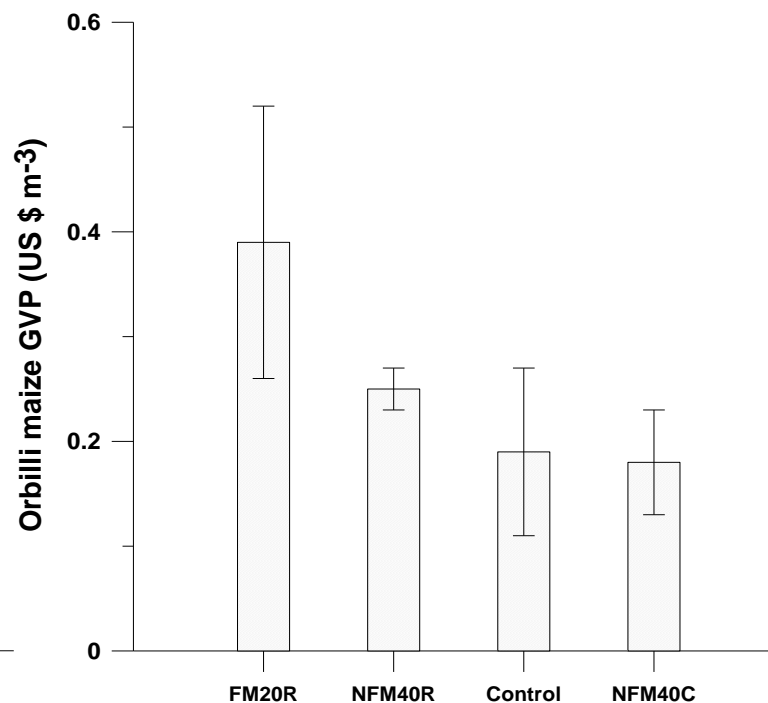
$$\text{CropWater Productivity} = \left(\frac{\text{Crop yield (Y)}}{\text{Crop Evapotranspiration (ET}_c\text{)}} \right)$$



Management regimes



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Management regimes



Highlights: Economic rations, guinea fowls



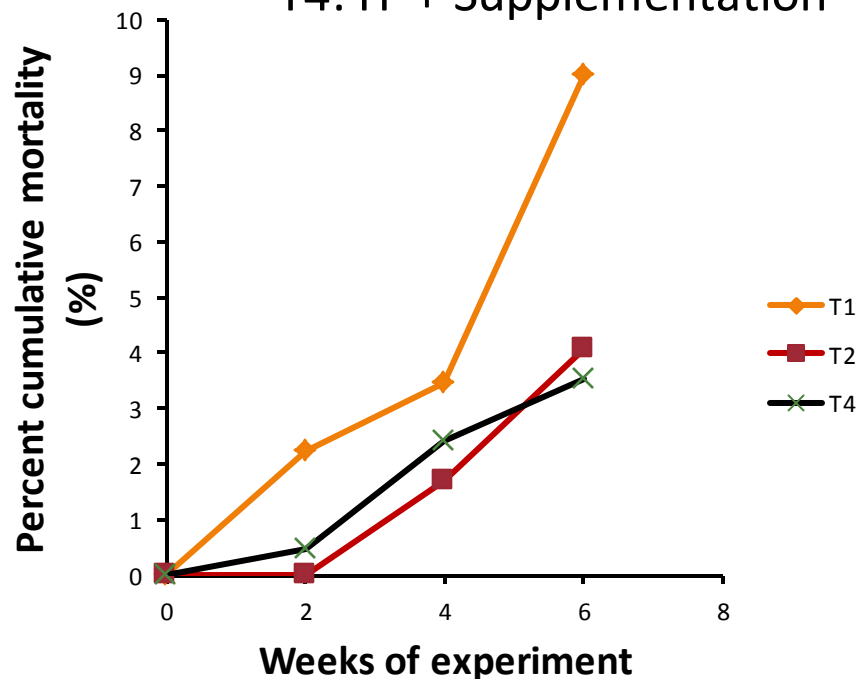
Highlights: Improved sheep/goat husbandry



T1: Farmers' feeding practice (F)

T2: F + Improved health care (H)

T4: H + Supplementation



Highlights: Improving household nutrition – milk processing



Food types



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Milk processing



Highlights: Improving household nutrition



Food types



Soybean processing



Highlights: Capacity building

Training courses

Integrated crop-livestock production

Experimental design

Cereal and legume processing

Food safety – marketers, processors

Irrigation techniques

Crop production – extension agents



Highlights: Farmers' field days





Thank you



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2013 – Work-plans

1. Situation analysis

- Identification of action research sites
- Collection of baseline information
- Construction of farm household typologies
- Identification and prioritization of best-bet innovations

2. Integrated systems improvement

- Integrated crop (maize, rice, soya ,cowpea) -livestock (sheep, poultry, pigs)
- Natural resource management
- Improving household nutrition
- Markets

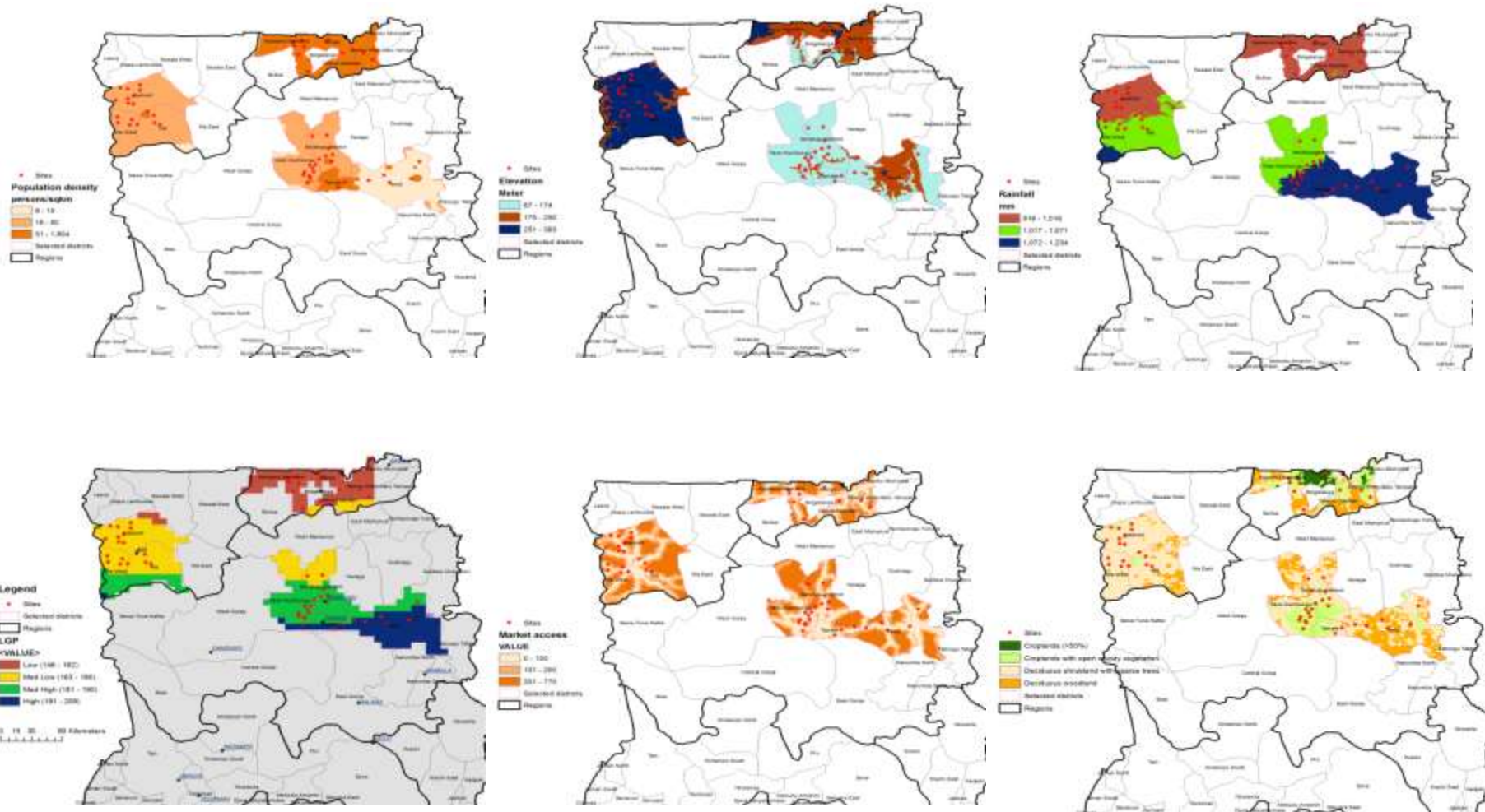
3. Scaling and delivery of integrated technologies

4. Monitoring and evaluation

5. Partnerships and capacity building



Site selection 2013 - Stratification and characterization

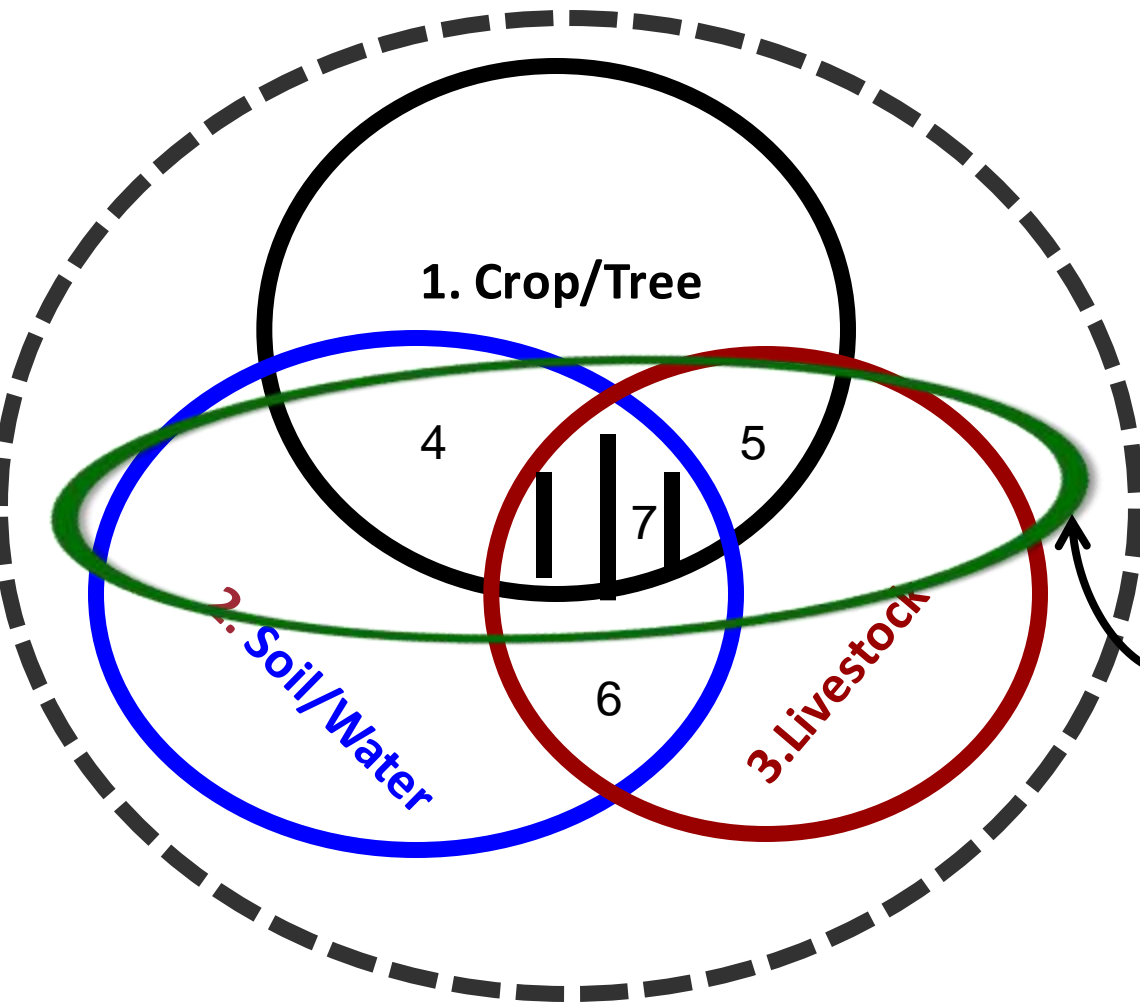


Stratification variables and cut-offs

Class	Length of Grow period	Market access
Low	≤ 162	≥ 200
Med Low	162 – 180	100 - 200
Med high	180 – 190	
High	>190	≤ 100



Africa RISING's Niche-Integrated Research



1. Crop

2. Soil

3. Livestock

4. Crop ↔ Soil

5. Crop ↔ Livestock

6. Soil ↔ Livestock

7. Crop ↔ Soil ↔ Livestock

- R4D Platforms
- Markets
- Institutions
- Policies

